



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,415	04/07/2005	Yuji Nagano	P27700	4904
7055	7590	12/06/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			CHOI, STEPHEN	
			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/530,415	NAGANO ET AL.
	Examiner	Art Unit
	Stephen Choi	3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 November 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
 - 4a) Of the above claim(s) 5 and 8-13 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 April 2005 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/13/05
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

1. Applicant's election with traverse of Species F in the reply filed on November 13, 2006 is acknowledged. The traversal is on the ground(s) that requirements for lack of unity of invention do not contemplate election of species when an application is filed under 35 U.S.C. § 111. Furthermore, applicants contend that the examiner has failed to establish a lack of unity of invention since the examiner has not pointed out any specific special technical features and the search for the species would be coextensive or at least significantly overlap. This is not found persuasive because the independent claim does not avoid the prior art as set forth below and there is no inventive link between the species, leaving claims joined thereby without a common inventive feature.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 07323403 (hereafter '403).

'403 discloses all the recited elements of the invention including left and right set teeth being a dovetail shaped and having a tooth tip which is gradually enlarged in a lateral direction (e.g., Figure 2).

4. Claims 1-4 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kullman (US 5,477,763).

Kullman discloses all the recited elements of the invention including left and right set teeth being a dovetail shaped and having a tooth tip which is gradually enlarged in a lateral direction (e.g., column 4, lines 3-5). Regarding claim 2, a straight tooth (e.g., 2). Regarding claims 3 and 7, interspersing the set teeth will result a height of the set teeth being smaller than a height of the straight tooth (e.g., note that height decreases tooth to tooth wherein the set teeth are positioned among the straight teeth). Regarding claims 4 and 6, an inclination and a bevel-dovetail shaped straight tooth having inclinations (e.g., Figure 3).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wright, Slaats et al., Yoshida et al., Tsujimoto, Hopper et al., and Tsujimoto et al. are cited to show related devices.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Choi whose telephone number is 571-272-4504. The examiner can normally be reached on Monday-Thursday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sc
30 November 2006

slc
STEPHEN CHOI
PRIMARY EXAMINER